



Pepper, Pepper Plants!

Denver Public Schools

In partnership with Metropolitan State College of Denver

El Alma de la Raza Project



Pepper, Pepper Plants

By Sandra Miller

Grade: Early Childhood Education

Implementation Time
for Unit of Study: 2 weeks

Denver Public Schools

El Alma de la Raza Curriculum
and Teacher Training Program

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Pepper, Pepper Plants!

Unit Concepts

- Plants need soil, water, and light to grow.
- Plants have several parts including roots, stems, and leaves.
- Plants provide food for people.
- Peppers, corn, squash, and pinto beans are staple crops in Mexico and are used in many Mexican dishes.
- Many farms in Mexico are individually owned, small plots, where the family works hard.

Standards addressed by this Unit

Reading and Writing

Students read and understand a variety of materials. (RW1)

Students write and speak for a variety of purposes and audiences. (RW2)

Students apply thinking skills to their reading, writing, speaking, listening, and viewing. (RW4)

Students read and recognize literature as a record of human experience. (RW6)

Mathematics

Students develop number sense, understand and use appropriate math vocabulary, understand and use numbers and number relationships in problem-solving situations, and communicate the reasoning used in solving these problems. (M1)

Students use a variety of tools and techniques to measure, apply the results in problem-solving situations, and communicate the reasoning used in solving these problems. (M5)

Science

Students understand the processes of scientific investigation and design, conduct, communicate about, and evaluate such investigations. (S1)

Students know and understand the characteristics and structure of living things, the processes of life, and how living things interact with each other and their environment. (S3)

History

Students understand that societies are diverse and have changed over time. (H3)

Geography

Students know how to use and construct maps and other geographic tools to locate and derive information about people, places and environments. (G1)

Students understand how economic, political, cultural, and social processes interact to shape patterns of human populations, interdependence, cooperation, and conflict. (G4)

Students understand the effects of interactions between human and physical systems and the changes in meaning, use, distribution, and importance of resources. (G5)

Art

Students know and apply visual art materials, tools, techniques, and processes. (A3)

Introduction

Mexico has a very limited amount of good agricultural land although farming and ranching have been the basic economic activities throughout its history. Land redistribution in the 1930s provided small, individually owned farms of 10 to 20 acres. Corn, beans, and squash are grown on the small plots. Irrigation projects have provided for the growth of wheat, while vegetables and oil seeds are grown north of Sinoloa. Tomatoes and lettuce are produced for the United States, and Mexico is the world's major exporter of vanilla. Life on rural farms is rustic and difficult. The government provides public schools, but the least developed schools are in the rural areas and secondary schools are almost nonexistent. Rural farms sell produce in local markets in addition to supplying small stores and the cities for a minimal income. There has been a great migration from rural areas to the cities due to lack of land, few social amenities, and few job opportunities. Seventy percent of Mexicans now live in cities. Typical Mexican meals consist of frijoles (refried beans), vegetable soups, tortillas, tamales, chicken dishes, and fruit drinks. Several types of peppers are used as spices. Serrano peppers are hot and the most popular. Arbot peppers are red and also hot, and are dried and added to foods. Pasilla peppers are used for stuffing chili rellenos. Jalepeño peppers are not popular. Refried beans, tortillas, burritos, tamales, quesadillas, and tacos are common Mexican foods in Colorado.

Implementation Guidelines

This unit is written specifically for ECE but may be altered for Kindergarten. Many hands-on activities are included. The process is very important at this level.

Instructional Materials

Downs, Cynthia and Erickson, Gloria. *Hispanic Games and Rhymes*. Instructional Fair
TS Denison, 1996.

Ehlert, Lois. *Growing Vegetable Soup*. Harcourt Brace, 1987.

Olawsky, Lynn Ainsworth. *Colors of Mexico*. Carolrhoda Books, Inc., 1997.

Stevens, Jan Romero. *Carlos and the Squash Plant*. Rising Moon, 1993.

Other materials listed by specific lessons.

Lesson Summary

Lesson 1	Introduction to Plants 4 Students will share what they know about plants and learn the concept of comparing and contrasting. Good vocabulary component!
Lesson 2	Seeds in Foods 6 Students investigate cut vegetables and learn about the seeds inside.
Lesson 3	Beans ‘n’ Bags 8 Scientific investigation, predicting and learning about the essential elements needed for growing healthy plants are the core of this lesson.
Lesson 4	Peppers, Corn and Beans! 11 Students plant seeds and are introduced to charting plant growth through the use of a picture journal.
Lesson 5	Mexico Lindo 14 Map and globe skills are introduced and the concept of “country” is taught in this lesson.
Lesson 6	Colors, Colors and More Colors 18 Creating bright prints using paint and vegetables is the highlight of this lesson.
Lesson 7	El Ranchito (The Little Farm) 20 Dramatization, sequencing, imagination and storytelling are the main components.
Lesson 8	Plant Parts 23 Students label the parts of a plant and compare results of experiments.
Lesson 9	Growth Cycle of a Plant 26 Students review journals of growing plants and make a flip book on plants.
Lesson 10	Fiesta! 29 Comparing and contrasting, measuring and labeling of foods culminates the instructional unit. As an extension, decorations and invitations for parents may be made prior to the fiesta day. Plants also may be transplanted into school garden outdoors or sent home as gifts.

LESSON 1: Introduction to Plants

What will students be learning?

STANDARDS

Students read and understand a variety of materials. (RW1)

Students write and speak for a variety of purposes and audiences. (RW2)

Students apply thinking skills to their reading, writing, speaking, listening, and viewing. (RW4)

BENCHMARKS

Students will identify specific information and details.

Students will recognize and use a broad vocabulary.

Students will recall specific details.

OBJECTIVES

Students will use their prior knowledge of plants to add to KWL charts.

Students will compare information between the two KWL charts.

Students will increase their vocabulary regarding plants.

What will be done to help students learn this?

INSTRUCTIONAL STRATEGIES

KWL chart

Teacher-directed questioning

Read aloud

Discussion

Recognition of spoken vocabulary

Small groups

PRELIMINARY LESSON PREPARATION

Prepare two KWL charts, one for each group. Each has three sections with the headings: What I Know About Plants; What I Want to Know About Plants; and What I Learned About Plants.

ACTIVITIES

Divide class into two groups. Paraprofessional (para) and teacher will lead group in discussion of what is known and what would like to be learned about plants and fill in KWL charts. Students listen to and think about what classmates add to chart. Students dictate different facts they know and original ideas about what they want to learn. Combine groups and compare information on charts, pointing out similarities and differences with the class. Teacher reads *Growing Vegetable Soup* to the class while stopping to discuss information from the charts. New vocabulary words may be added to the charts. For literacy read *Pumpkin Fiesta* by Caryn Vacowitz.

Optional accompanying song/poems from *Hispanic Games and Rhymes* by Cynthia Downs and Gloria Erickson. "The Beautiful Gardener" (page 30) may be used in Lessons 1–5.

VOCABULARY

Huerto — Spanish word for garden

Plantas — Spanish word for plants

Vine — long stem of a plant

Blossom — flower of a plant

Agua — Spanish word for water

RESOURCES/MATERIALS

KWL charts on butcher or chart paper

Growing Vegetable Soup

Hispanic Games and Rhymes

Mis Plantas el huerto

Pumpkin Fiesta

Markers

ASSESSMENT

Teacher will begin documenting what students dictate they have learned from the lesson on the KWL charts (information from other lessons will be added to the KWL chart as this unit is taught). Students will use at least three of the vocabulary words taught in this lesson. Each student will contribute to the KWL chart (participation). Students will be able to verbalize the origin of a plant from a seed. Students will be able to tell where vegetables come from.

LESSON 2: Seeds in Foods

What will students be learning?

STANDARDS

Students develop number sense, understand and use appropriate math vocabulary, understand and use numbers and number relationships in problem-solving situations, and communicate the reasoning used in solving these problems. (M1)

Students understand the processes of scientific investigation and design, conduct, communicate about, and evaluate such investigations. (S1)

Students know and understand the characteristics and structure of living things, the processes of life, and how living things interact with each other and their environment. (S3)

BENCHMARKS

Students will demonstrate an understanding of numbers from 1 to 10.

Students will recognize properties of seeds.

Students will conduct simple scientific experiments.

OBJECTIVES

Students will investigate the inside of cut vegetables.

Students will identify seeds.

Students will count the number of seeds found in vegetables.

Students will compare size and color of seeds from different vegetables.

What will be done to help students learn this?

INSTRUCTIONAL STRATEGIES

Investigate

Teacher-directed questioning

Student directed

Categorization

Comparing/contrasting

PRELIMINARY LESSON PREPARATION

Prepare several beans, ears of corn, and precut peppers. Cut peppers in half. For each of the two groups, place 10–15 beans, three or four ears of corn, and three or four cut peppers on a large tray.

ACTIVITIES

Students investigate the various vegetables. Teacher guides and questions the group to look at, compare, and count the number of seeds in the vegetables. At the end of lesson, students summarize findings about seeds and add information to KWL chart.

For literacy read *Cuckoo, Cucu* by Lois Ehlert.

RESOURCES / MATERIALS

Several peppers, ears of corn and beans

Small paper plates

Knife to cut peppers

Cuckoo Cucu

ASSESSMENT

Students will be assessed on:

- The correct oral response to the number of seeds observed in each vegetable.
- Correctly matching the seeds to their source.
- Providing one difference and one similarity of the seeds gathered.

LESSON 3: Beans 'n' Bags

What will students be learning?

STANDARDS

Students apply thinking skills to their reading, writing, speaking, listening, and viewing. (RW4)

Students use a variety of tools and techniques to measure, apply the results in problem-solving situations, and communicate the reasoning used in solving these problems. (M5)

Students understand the processes of scientific investigation and design, conduct, communicate about, and evaluate such investigations. (S1)

Students know and understand the characteristics and structure of living things, the processes of life, and how living things interact with each other and their environment. (S3)

BENCHMARKS

Students will use units of measure.

Students will identify specific information and details.

Students will demonstrate understanding of cause and effect.

Students will recognize and use a broad vocabulary.

Students will demonstrate understanding of visual correlation between picture and word.

Students will conduct simple scientific experiments.

OBJECTIVES

Students will be able to relate the three things plants need to grow: soil, light, and water.

Students will take part in a scientific investigation.

Students will predict what will happen if a seed is denied one of the three necessary elements for growth.

Students will see print has meaning.

What will be done to help students learn this?

INSTRUCTIONAL STRATEGIES

Modeling

Recognition of spoken vocabulary

Discussion

Predicting

Experimenting

Teacher-directed questioning

Concepts of print

PRELIMINARY LESSON PREPARATION

Prepare plastic bags for each child by stapling a paper towel into each bag. Have chart paper and markers available. Make a chart for class predictions. Prepare cups of soil for experiments.

ACTIVITIES

Discuss with class the three important things plants need to grow. On chart paper, draw and label a sun, soil, and water as they are mentioned. Explain that soil is another word for dirt and light may be another word for sun. Discuss with the class what might happen if one of the three elements were eliminated. Show class one plastic cup with soil. Place a bean seed in soil and add water. Put the cup in a dark closet. Have class predict if the seed will grow and write prediction on chart paper. Use a second plastic cup with soil. Place a bean seed in soil, do not add water. Put cup in a sunny location. Model placing three bean seeds in plastic bags with 1/4 cup water. Have class predict if the seed will grow and write prediction on chart paper. Student will then place seeds in plastic bags as per model. Write names on bags with permanent marker. Tape bags in a classroom window in view of students. Write the word soil on KWL chart.

For literacy read *Agua, Agua, Agua* by Pat Mora and *After the Storm* by Alma Flor Ada.

VOCABULARY

Soil — dirt; surface layer of the earth

Light — that which makes it possible to see

Water — clear liquid found in rivers, lakes, and rain; used for drinking

Experiment — to participate in the process of discovering something not yet known

Predict — to guess what will happen

RESOURCES / MATERIALS

Two plastic cups with soil

Three bean seeds per student (plus a few extra)

Plastic resealable bags and paper towel for each student

Stapler

Tape

Measuring cups

Water

Permanent marker

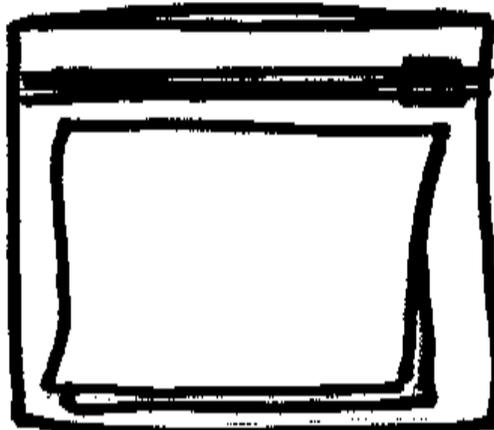
ASSESSMENT

Assess students on their ability to:

- verbally recall the three elements necessary for plant growth;
- participate in predicting outcome of experiments; and
- correctly place seeds and measure water into plastic bags.

Instructions for plastic bags for Beans 'n' Bags

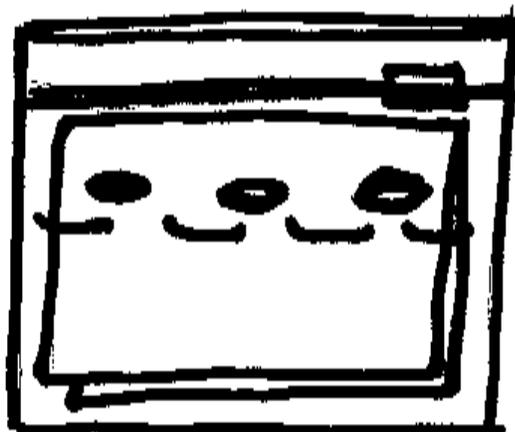
Fold paper towel to fit in plastic bag.



Staple across bag 2/3 of the way up from the bottom of the bag.



Seeds are to be place above the staples.



LESSON 4: Peppers, Corn and Beans!

What will students be learning?

STANDARDS

Students write and speak for a variety of purposes and audiences. (RW2)

Students apply thinking skills to their reading, writing, speaking, listening, and viewing. (RW4)

Students use a variety of tools and techniques to measure, apply the results in problem-solving situations, and communicate the reasoning used in solving these problems. (M5)

Students know and understand the characteristics and structure of living things, the processes of life, and how living things interact with each other and their environment. (S3)

Students understand that societies are diverse and have changed over time. (H3)

Students understand how economic, political, cultural, and social processes interact to shape patterns of human populations, interdependence, cooperation, and conflict. (G4)

BENCHMARKS

Students will demonstrate an understanding of numbers.

Students will use units of measure.

Students will demonstrate picture reading.

Students will recognize growth cycle of plants.

Students will record data in a variety of ways.

Students will identify basic common needs of all people.

Students will recognize similarities and differences of families.

OBJECTIVES

Students will participate in planting seeds.

Students will predict how long it will take for seeds to grow.

Students will begin a picture journal to record the growth of plants.

Students may relate their own family's gardening experiences.

What will be done to help students learn this?

INSTRUCTIONAL STRATEGIES

Discussion

Predicting

Picture journaling

Letter sound correspondence

Recognition of spoken vocabulary

Modeling

PRELIMINARY LESSON PREPARATION

Make copies and cut construction paper for plant journals. Cut apart pages and staple journals. Students will need three journals, one for each type of seed. Prepare labels for plant cups with the words and corresponding color-coding (pepper–red, bean–green, corn–yellow).

ACTIVITIES

Discuss the cycle of plant growth from the vegetable seeds in Lesson 2, to the growing of plants and harvesting of vegetables to eat. Explain that many people grow gardens. Let students relate their own experiences with gardening. Explain that there are many small farms where the family works to grow vegetables to not only eat but to sell as their way to support themselves. Model planting each type of seeds. Read the plant names and discuss the beginning letter sound for each. Explain the color-coding on the cups. Divide the class into two groups. Para and teacher will facilitate the planting of each type of seed with students. Each student will fill their cup two-thirds with soil, make a hole for three or four seeds, cover with soil, and water. Write student's name on each cup with permanent marker. Place cups on tray in a sunny part of the room. Pass out journals. Explain that sprouting means when a plant begins to grow. Have students predict the number of days it will take their plant to sprout by circling the number on page 2 of the journal, and then drawing a picture of soil in a cup with seeds in it. Write the word sprout on the KWL chart. For literacy read *Carlos and the Cornfield* by Jan Romero Stevens.

VOCABULARY

Sprout — beginning growth of a plant

Support — to take care of a family

Harvest — to pick ripe vegetables

Tortilla — flat, unleavened bread made from flour or corn

Cornmeal — meal made from ground dried corn

Peculiar — strange, unusual

Uno — Spanish word for the number one

Dos — Spanish word for the number two

Tres — Spanish word for the number three

Cuatro — Spanish word for the number four

Cinco — Spanish word for the number five

RESOURCES/MATERIALS

Three clear plastic cups per child

Three or four seeds of each (bean, corn, and pepper) per child

Water

Measuring cups

Trays

Newspaper to cover planting area

Copies of journal pages

Construction paper

Markers

The Tortilla Factory

Carlos and the Cornfield

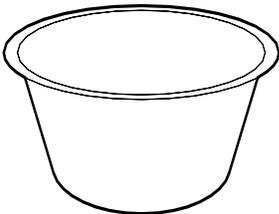
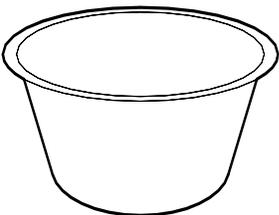
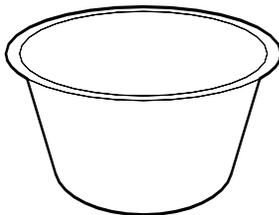
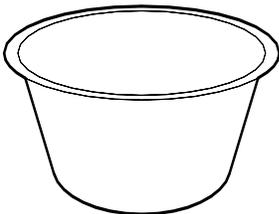
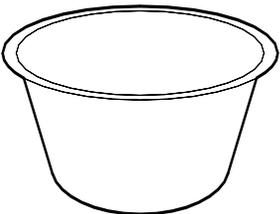
ASSESSMENT

Students will be assessed in three areas:

- personal anecdotes on gardening;
- correct sequence of planting; and
- completion of page 2 of their journal.

My Plant Journal

Make copies of this page and cut apart. Staple together to create a journal. Students will need three journals, one for each type of seed they plant.

<h2>My Plant Journal</h2> <p>Name _____</p> <p>Circle which type of seed is being recorded in this journal.</p> <div style="display: flex; justify-content: space-around;"><div style="text-align: center;"><p>Pepper</p></div><div style="text-align: center;"><p>Bean</p></div><div style="text-align: center;"><p>Corn</p></div></div>	<p>My plant will sprout in</p> <p>1 2 3 4 5 6 7 8 9 days</p> <div style="text-align: center;"></div> <p style="text-align: right;">Page 2</p>
<p>My plant sprouted in</p> <p>1 2 3 4 5 6 7 8 9 days</p> <div style="text-align: center;"></div> <p style="text-align: right;">Page 3</p>	<div style="text-align: center;"></div> <p style="text-align: right;">Page 4</p>
<div style="text-align: center;"></div> <p style="text-align: right;">Page 5</p>	<div style="text-align: center;"></div> <p style="text-align: right;">Page 6</p>

LESSON 5: Mexico Lindo

What will students be learning?

STANDARDS

Students write and speak for a variety of purposes and audiences. (RW2)

Students apply thinking skills to their reading, writing, speaking, listening, and viewing. (RW4)

Students know how to use and construct maps and other geographic tools to locate and derive information about people, places and environments. (G1)

BENCHMARKS

Students will recall specific details.

Students will analyze maps and globes.

Students will apply the themes of geography to understand self and others.

OBJECTIVES

Students will understand that Mexico is a country.

Students will be able to locate Mexico on a map of North America.

What will be done to help students learn this?

INSTRUCTIONAL STRATEGIES

Teacher guided

Discussion

Teacher-directed questioning

PRELIMINARY LESSON PREPARATION

Prepare map of classroom (including tables, chairs, shelves, doors, etc.). Prepare map of school including rooms and doors. Make copies of a city map and a state map. Make copies of the North American map included in this lesson.

ACTIVITIES

Have class sit on the floor in a circle. Teacher leads group discussion to introduce the concept of a map. Show students map of the classroom. (Be sure to lay all maps on the floor in the center of circle). Explain that this is how the room would look from the ceiling. Have children stand up and pretend to put the children into a magical shrinking machine and push the button. A maraca or other musical instrument can be used to help with the magical shrinking process. Explain that now they are smaller and could stand in the map of the class. Use a small item (such as a Gummy Bear) to show the relative size of the students on the map. Show and describe the map of the school. Use the “shrinking machine” and point out where the classroom is on the map. Use a push pin for the size of a child on the map. Color in the room and put an X on the main doors of the school. Shrink the students again and show them a map of the city. Point out where the school is and color that spot on the map. Explain that now they are so small, they are only the size of a dot on the map. Shrink the class once again and show

them a map of your state, marking the city and then a map of North America. Talk about the fact that we live in the United States of America and that it is a large place called a country. Explain that there are many countries and show where Mexico is in relation to the USA. Put an X on your state and color in Mexico, explaining that it is also a country. Show the students which direction Mexico is from their school and discuss how long it would take to walk or drive from your school to Mexico. Pass out copies of the North America maps. Facilitate students in putting an X on your state and coloring in Mexico. Add the words country, USA and Mexico to KWL chart.

For literacy read *My Mexico* by Tony Johnston.

VOCABULARY

Country — land; whole territory of a nation

USA — United States of America

Mexico — country to the south of the USA

RESOURCES / MATERIALS

Map of classroom

Map of school

Map of city

Map of state

Map of North America

Gummy Bear (or other small item)

Push pin

Markers

Reproduced copies of North American map

Maraca or other musical instrument

Count Your Way Through Mexico

My Mexico

ASSESSMENT

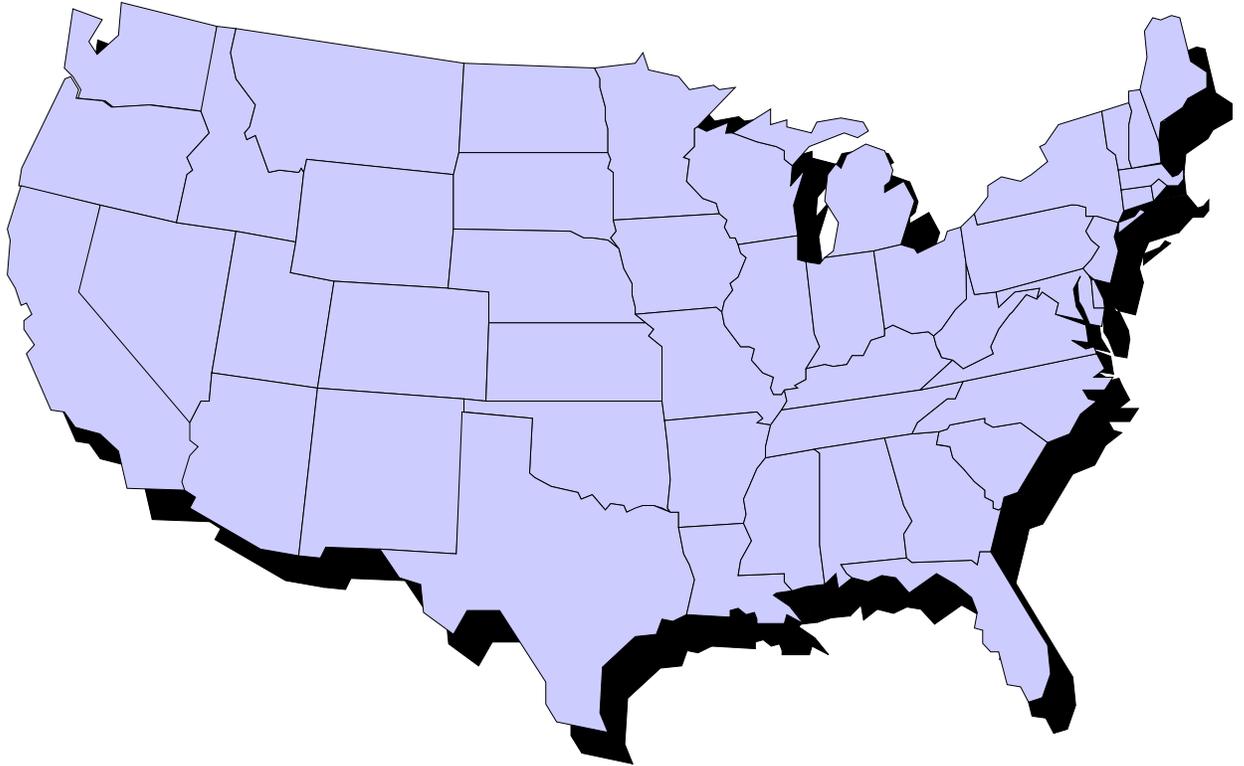
Students will be assessed in the following three areas:

- ability to locate Mexico on a map using a copy of a North America map;
- ability to identify the language spoken by many people in Mexico; and
- ability to count to five in Spanish.

Map of North America



Map of the United States of America



LESSON 6: Colors, Colors and More Colors

What will students be learning?

STANDARDS

Students read and understand a variety of materials. (RW1)

Students know and understand the characteristics and structure of living things, the processes of life, and how living things interact with each other and their environment. (S3)

Students know and apply visual art materials, tools, techniques, and processes. (A3)

BENCHMARKS

Students will use art elements creatively.

Students will demonstrate ability to create art works using a variety of media.

OBJECTIVES

Students will use paint and vegetables to create prints.

Students will identify the colors red, green, and yellow.

What will be done to help students learn this?

INSTRUCTIONAL STRATEGIES

Reading in content area

Read aloud

Recognition of spoken vocabulary

Student directed

PRELIMINARY LESSON PREPARATION

Cover tables with newspaper. Pour red, green, and yellow paint into flat trays. Provide the three colors for each table of four to six children. Cut peppers into strips and rings. Husk fresh corn on the cob. Poke forks into beans. Cut construction paper.

ACTIVITIES

Read *Colors of Mexico* to class. Take time to discuss the different colors in the book. Explain that many things in Mexico are decorated with bright colors. Show the fresh peppers, beans, and corn. Place the pepper in the red paint tray, the beans in the green paint tray, and the corn in the yellow paint. Model using the various vegetables to make prints on the construction paper. Show that a vegetable makes a print by placing it on the paper and then lifting it up without sliding it or moving it around on the paper (less paint makes better prints). Explain that the vegetables need to be put back into the color they came out of. Students choose construction paper and go to tables to create prints. Students will need to wash-up after painting. Students may check for growth in bean bags.

For literacy read *Laughing Tomatoes* by Francisco X. Alarcón.

Optional accompanying song/poems from *Hispanic Games and Rhymes* by Cynthia Downs and Gloria Erickson. "What's to Eat" (page 35) may be in Lesson 6–10.

VOCABULARY

Rojo — Spanish word for red

Amarillo — Spanish word for yellow

Verde — Spanish word for green

RESOURCES/MATERIALS

Colors of Mexico by Lynn Ainsworth Olawsky

Newspaper

A variety of colored construction paper

Shallow trays

Red, green, and yellow tempera paint

Several fresh peppers cut into strips and rings

Fresh green beans

Ears of corn

Plastic forks

Laughing Tomatoes

The Pinata Maker

Hispanic Games and Rhymes

ASSESSMENT

Students will be assessed on their ability to:

- identify the colors red, green, and yellow in their artwork; and
- follow directions for print making by replacing vegetables in correct colors and not sliding vegetable around on paper.

LESSON 7: El Ranchito (The Little Farm)

What will students be learning?

STANDARDS

Students read and understand a variety of materials. (RW1)

Students write and speak for a variety of purposes and audiences. (RW2)

Students read and recognize literature as a record of human experience. (RW6)

Students understand that societies are diverse and have changed over time. (H3)

Students understand how economic, political, cultural, and social processes interact to shape patterns of human populations, interdependence, cooperation, and conflict. (G4)

Students understand the effects of interactions between human and physical systems and the changes in meaning, use, distribution, and importance of resources. (G5)

BENCHMARKS

Students will identify oral sequence.

Students will relate ideas in stories and other literature to events in daily life.

Students will recognize similarities and differences of physical and cultural characteristics of places and regions.

Students will recognize ways that people interact with their environment.

OBJECTIVES

Students will identify story as being made up.

Students will act out the story in a dramatization.

Students will correctly sequence events of story.

Students will begin to understand the use of imagination.

What will be done to help students learn this?

INSTRUCTIONAL STRATEGIES

Read aloud

Dramatization

Sequence

Teacher guided

Discussion

Direct interaction

PRELIMINARY LESSON PREPARATION

Prepare a large tub with sand or soil to demonstrate irrigation.

ACTIVITIES

Discuss with the class the climate of the arid portion of Mexico. Ask students to think of ways to provide water for crops if there is no rain. Explain that a ditch can be dug from a source of water such as a river to a field. Using the tub of sand or soil, dig a little ditch and pour water in at the “source.” Show class how the water flows to the needed area. Explain that this is the use of irrigation. Add the word irrigation to KWL chart. Read *Carlos and the Squash Plant* to the class. Discuss whether the events in the story could really happen. Divide the class into two groups. Choose students to act out the parts of Carlos, his mother, his father, brother, and sister. The rest of the group acts as their audience. Teacher and Para help actors retell the story prompting the mother to tell Carlos to bathe and questioning him about it. Each day Carlos puts on a bigger hat. The family acts out sitting together for meals and working in the fields. Father, brother, and sister can question Carlos about the hats. (Family members can vary depending on students in group.) When one group completes the story, teacher and Para choose new actors until everyone in the group has had a turn. Pictures may be taken of actors to be shown to parents and placed in portfolios.

During Centers Time, students may check for plant growth in cups. If a sprout has appeared, they may draw it on page 3 of their Plant Journal and circle number of day before a spout appeared.

VOCABULARY

Irrigation — artificial water source for crops

Adobe — sun-dried brick made of clay

Aroma — a pleasant, often spicy odor

Coil — to wind around in a circular fashion

Shrink — to get smaller

RESOURCES/MATERIALS

Carlos and the Squash Plant by Jan Romero Stevens

Large tub

Sand or soil

Water

Two blankets for beds

Several play dishes

Six hats of different sizes (straw hats or sombreros would be best)

Overalls for Carlos, father, and brother (optional)

Aprons for mother (optional)

Camera (optional)

ASSESSMENT

Students will be assessed on their ability to:

- participate in dramatization;
- speak loud enough for audience to hear;
- reenact the story in the correct sequence; and
- verbally explain the basics of irrigation; explaining in their own words how water moves from the source to the needed area.

EXTENSIONS

The Playhouse may be turned into Carlos' house with plastic vegetables and Mexican foods in the refrigerator, aprons and overalls for dress-up, baskets, gardening tools, blankets, and empty shampoo bottles.

The Sand Table may be used as an area to experiment with irrigation. Students may make dioramas of Carlos' farm in the Art Center or at home.

LESSON 8: Plant Parts

What will students be learning?

STANDARDS

Students write and speak for a variety of purposes and audiences. (RW2)

Students apply thinking skills to their reading, writing, speaking, listening, and viewing. (RW4)

Students understand the processes of scientific investigation and design, conduct, communicate about, and evaluate such investigations. (S1)

Students know and understand the characteristics and structure of living things, the processes of life, and how living things interact with each other and their environment. (S3)

BENCHMARKS

Students will demonstrate understanding of cause and effect.

Students will recognize and use a broad vocabulary.

Students will recall specific details.

Students will record data in a variety of ways.

Students will recognize a vocabulary common to study of self and others.

OBJECTIVES

Students will investigate growing plants and beans in bags.

Students will identify parts of plants.

Students will draw a plant including roots, stem, leaves, and flowers.

Students will add to plant journals.

What will be done to help students learn this?

INSTRUCTIONAL STRATEGIES

Investigate

Direct interaction

Teacher-directed questioning

Student directed

Picture journaling

Comparing

Discussion

PRELIMINARY LESSON PREPARATION

Buy or grow several flowering plants. Cover tables with newspaper. Make copies of the Parts of a Plant worksheet.

ACTIVITIES

Show the class a bean plant in a plastic bag (from Lesson 3). Point out the roots growing down and the stem growing up. Point out leaves. Show the class a plant, exposing roots from soil.

Compare with bean plant. Show experimental plants grown without sun and without water. Discuss outcomes and compare with predictions. Divide class into small groups. At tables, students investigate plants and their bean bags. Teacher and Para guide and question the group to find roots, stems, leaves, and flowers. Students write name and draw plants, including all four parts, on the Parts of a Plant worksheet. Students dictate parts to teacher and Para.

During Centers Time, students may add to Plant Journals depending on plant growth.

For literacy read *Magic Windows* by Carmen Lomas Garza.

Optional accompanying song/poems from *Hispanic Games and Rhymes* by Cynthia Downs and Gloria Erickson, "Chocolate" (page 4).

VOCABULARY

Root — underground part of plant for collecting water and nutrients

Stem — the main, upward growing axis of a plant

Leaf — part of a plant used for gathering sunlight

Flower — part of a plant containing the reproductive organs

RESOURCES/MATERIALS

One small flowering plant for every two or three students

Copies of Parts of a Plant worksheet

Newspaper

Markers

ASSESSMENT

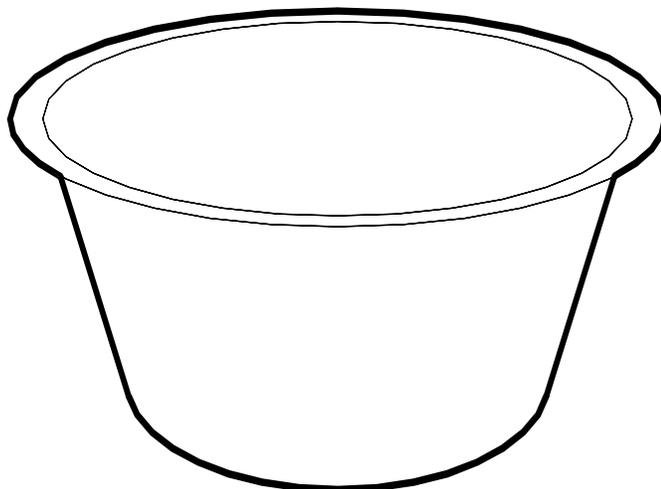
Student should be able to:

- draw a complete plant, including four parts; and
- dictate each part of plant, including roots, stem, leaves, and flowers.

Parts of a Plant Worksheet

Name _____

Have students draw a plant, including all four parts (root, stem, leaf and flower.)



LESSON 9: Growth Cycle of a Plant

What will students be learning?

STANDARDS

Students read and understand a variety of materials. (RW1)

Students write and speak for a variety of purposes and audiences. (RW2)

Students apply thinking skills to their reading, writing, speaking, listening, and viewing. (RW4)

Students understand the processes of scientific investigation and design, conduct, communicate about, and evaluate such investigations. (S1)

Students know and understand the characteristics and structure of living things, the processes of life, and how living things interact with each other and their environment. (S3)

BENCHMARKS

Students will identify oral sequence.

Students will recall specific details.

Students will recognize growth cycle of plants.

Students will recognize similarities and differences of physical and cultural characteristics of places and regions.

OBJECTIVES

Students will sequence the growth cycle of a plant using pictures.

Students will develop fine motor skills using scissors and markers.

Students will apply thinking skills to their reading, listening, and viewing.

As a class, students will participate in reading their books.

What will be done to help students learn this?

INSTRUCTIONAL STRATEGIES

Modeling

Shared reading

Teacher guided

Sequencing

PRELIMINARY LESSON PREPARATION

Make copies of Plant Growth Cycle sheet.

ACTIVITIES

Teacher gives directions for coloring Plant Growth Cycle books. Model cutting on lines for the pages and putting book together in sequence. Read completed book to class. At tables, students color, cut, and assemble books. Teacher and Para staple book pages. Regroup and read books together as a whole class. Discuss the use of harvested corn, peppers, and beans from their plants. Explain how corn is dried and ground into meal. Show cornmeal to class. Talk about favorite Mexican dishes that include these vegetables such as tacos, burritos, enchiladas, tostadas, tamales, and frijoles. Let students relate personal experiences with Mexican foods. Explain that the students will be preparing a fiesta the following day.

During Centers Time students may add to Plant Journals depending on plant growth.

For literacy read *Sip, Slurp, Soup, Soup, Caldo Caldo Caldo* by Diane Gonzales Bertrand.

Optional accompanying song/poems from *Hispanic Games and Rhymes* by Cynthia Downs and Gloria Erickson, "Chocolate" (page 4).

VOCABULARY

Fiesta — Spanish word for celebration

Caldo — Spanish word for soup

Cycle — recurring events as in a circle

RESOURCES/MATERIALS

Reproduced copies of Plant Cycle paper

Scissors

Markers

Staplers

Sip, Slurp, Soup, Soup, Caldo, Caldo, Caldo

Hispanic Games and Rhymes

ASSESSMENT

Assess students on their ability to:

- cut pages apart for books;
- correctly assemble books; and
- participate in shared reading turning pages and attending to each page.

Growth Cycle Books

Have students cut apart the growth cycle drawings below and put them in the correct sequence. Show them how to assemble the pieces into a book. Students will then color their books.



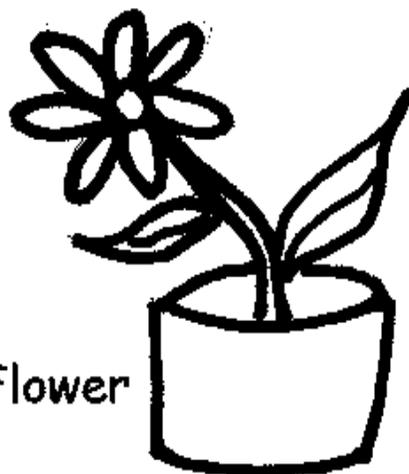
Plant seed



Sprout



Leaves



Flower



Grow vegetable



New seeds

LESSON 10: Fiesta!

What will students be learning?

STANDARDS

Students read and understand a variety of materials. (RW1)

Students apply thinking skills to their reading, writing, speaking, listening, and viewing. (RW4)

Students use a variety of tools and techniques to measure, apply the results in problem-solving situations, and communicate the reasoning used in solving these problems. (M5)

Students understand how economic, political, cultural, and social processes interact to shape patterns of human populations, interdependence, cooperation, and conflict. (G4)

BENCHMARKS

Students will use units of measure.

Students will demonstrate understanding of visual correlation between picture and word.

Students will recall specific details.

Students will recognize a vocabulary common to study of self and others.

Students will recognize similarities and differences of physical and cultural characteristics of places and regions.

Students will recognize similarities and differences of families.

OBJECTIVES

Students will compare Plant Journals with Growth Cycle books.

Students will measure ingredients.

Students will identify foods containing corn, pinto beans, and peppers.

What will be done to help students learn this?

INSTRUCTIONAL STRATEGIES

Teacher-directed questioning

Recognition of spoken word

Summarizing

Comparing

Student directed

Discussion

PRELIMINARY LESSON PREPARATION

Buy ingredients for cornmeal pancakes, sweet empanadas, burritos and paper plates. Prepare sweet empanada filling according to recipe. Make large recipes of cornmeal pancakes and sweet empanadas using pictures to illustrate. Preheat oven to 350°F. Dice tomatoes. Grate cheese (if needed). Chop lettuce and bell peppers.

ACTIVITIES

Pass out Plant Journals and Growth Cycle books to class. Students compare and discuss findings. Show recipes for cornmeal pancakes and sweet empanadas. Explain that the students will take turns making each part of the fiesta meal. Have all students wash hands. Divide the class into two groups. One group makes cornmeal pancakes by reading the recipe with the teacher or para. Students may take turns helping to add ingredients. All students may stir ingredients with a wire whip. Teacher or para will heat pan on stove. Students may take turns measuring 1/3 cup mixture and pouring it onto pan. Teacher or para turns pancakes and remove from pan when done. The other group makes sweet empanadas by reading the recipe with the teacher or para. Students may take turns helping to add ingredients for dough. Give each student a small ball of dough. Then pat dough flat. Teacher or para gives each student a spoonful of filling in center of dough and helps students mold dough around filling. Place on small squares of aluminum foil with students name on each, then place on cookie sheets. Bake in oven 12 to 15 minutes or until golden brown. Switch groups. When both groups finish, seat students at tables, pass out paper plates and explain the process of making a burrito. Show students how to scoop refried beans onto tortillas, add cheese, tomatoes, lettuce, bell peppers and roll up. Distribute sweet empanadas, cornmeal pancakes and burrito makings to each table. Children make burritos and it's time to fiesta!

For literacy read *The Tamale Quilt* by Jane Tenorio-Coscarelli. Optional accompanying song/poems from *Hispanic Games and Rhymes* by Cynthia Downs and Gloria Erickson. "What's to Eat" (page 35) and "Tortillas" (page 44).

VOCABULARY

Empanadas — Mexican dish

Burrito — tortilla filled with various ingredients

Recipe — directions for cooking

RESOURCES / MATERIALS

Stove with oven

Large pan

Aluminum foil

Two large bowls

Ingredients as per recipes

Paper plates

Measuring cups and spoons

Cookie sheets

Helping parents (optional, but very helpful!)

Fiesta USA

Hispanic Games and Rhymes

A Pinata

The Tamale Quilt

ASSESSMENT

Students will be assessed on their ability to:

- participate in comparing journals and books;
- follow directions for cooking project; and
- identify at least two foods containing corn, pinto beans, or peppers.

Recipes for Lesson 10

CORNMEAL PANCAKES may be found in back of *Carlos and the Cornfield* (makes about 15 pancakes)

SWEET EMPANADAS

Filling Ingredients:

- 1 egg
- 1/2 cup raisins
- 1/2 teaspoon Vanilla extract
- 1/4 lb. Mozzarella cheese grated
- 1 cup sugar

Directions

Combine ingredients in a pot. Heat on stove at medium temperature stirring constantly until it is consistency of a cream.

Dough Ingredients:

- 1 egg
- 1 teaspoon salt
- 1/4 cup water
- 1/4 cup milk
- 4 ounces butter
- 2 cups all purpose flour
- 1 teaspoon baking powder

Directions

Preheat oven to 350°F. Beat together water, milk, butter and egg. Add flour, baking powder and salt. Knead with hands until the dough easily detaches from your hands. Make small balls of dough, flattening or rolling them out to approximately three-inch circles. Spoon small amount of filling onto center of dough. Pull edges of dough up to center and pinch together. Place on cookie sheets, bake 12–15 minutes or until golden brown. Yields about 20 empanadas.

BURRITOS

Ingredients

- Small flour tortillas
- Heated refried beans
- Chopped tomatoes
- Chopped lettuce
- Chopped bell peppers
- Grated Cheddar cheese

Directions

Spoon refried beans onto tortilla. Add other ingredients to taste. Roll tortilla into burrito shape. Eat!

UNIT ASSESSMENT

How will students demonstrate proficiency?

PERFORMANCE TASK

Students will draw and dictate answers to the following questions.

1. What three things are needed for a plant to grow?
2. What two plants may be grown on a farm in Mexico?
3. What foods do people eat that come from those plants?

SCORING RUBRIC

Use the Rubric below to score answers on Performance Task and compile a total score. Combine with Lesson 8 Assessment and Lesson 9 Assessment to compile overall score.

<u>Rubric Points</u>	<u>Description</u>
4	Exceeds correct answers by giving more examples.
3	All questions answered completely and correctly.
2	Partially correct answers/or correct answers to two of the questions.
1	Lacks understanding/little, if any correct information.

Bibliography

- Alarcon, Francisco X. *Laughing Tomatoes*. Children's Book Press, 1997.
A bilingual collection of short and simple poems that celebrate spring, family, and sunshine. Colorful double-page illustrations featuring Latino children.
- Ancona, George. *Fiesta USA*. Lonestar Books. 1995.
This book invites you to four Fiestas celebrated in the USA. Great photographs of traditional celebrations.
- Ancona, George. *The Pinata Maker*. Harcourt Brace. 1994.
English and Spanish. This book documents the artistry of Tio Rico, the village pinata maker. Beautiful photographs.
- Bertrand, Diane Gonzales. *Sip, Slurp, Soup, Soup, Caldo Caldo Caldo*. Pinata Books, 1996.
A bilingual picture book offers up a celebration of a kitchen where Mama creates a fabulous vegetable soup with the help of all the children. Papa takes the family to buy tortillas to top off the meal. Rhythmic text with repetitive phrases.
- Downs, Cynthia and Gloria Erickson. *Hispanic Games and Rhymes*. Instructional Fair TS Denison, 1996.
Bilingual poems, rhymes, songs, and games from Central and South America. A wonderful resource to accompany any Early Childhood Hispanic Unit.
- Ehlert, Lois. *Cuckoo, Cucu*. Harcourt Brace and Co., 1997.
English and Spanish. Beautifully illustrated with cutouts, collages, and contrasting backgrounds. A Mexican folktale weaving a story of seeds, nature, and seasons. A must for young audiences!
- Ehlert, Lois. *Growing Vegetable Soup*. Harcourt Brace and Co., 1987.
Brightly-colored collage illustrations of a father and child sharing the simple joys of planting, watering, and watching seeds grow in their garden. Perfect for Early Childhood classrooms.
- Flor Ada, Alma. *After the Storm*. Santillana Publishing Co., 1989.
The story of a sunflower seed and the plant cycle. Available in big book form.
- Garza, Carmen Lomas. *Magic Windows*. Children's Book Press 1999.
Bilingual. Several short stories portrayed through papel picado (cut-paper art). The author spins a tale about her family and the traditions and beliefs of their Mexican heritage.
- Haskins, Jim. *Count Your Way Through Mexico*. Carolrhoda Books, Inc. 1989.
The numbers 1-10 are taught in Spanish. Each number presents a concept about Mexico and its culture.
- Johnston, Tony. *My Mexico*. Penguin Putman Books, 1996.
A collection of poems about Mexico introduces young readers to many different facets of the nation's customs and customs.
- Kleven, Elisa. *Hooray, A Pinta*. Dutton Children's Books, 1996.
A beautifully illustrated story recounting the preparations of Clara and Sampson for Clara's birthday party.

Mora, Pat. *Agua, Agua, Agua*. Goodyear Books, 1994.

English and Spanish. Simple and easy to understand version of the Aesop's fable about the raven who is thirsty and must find a way to reach the water he seeks.

Olawsky, Lynn Ainsworth. *Colors of Mexico*. Carolrhoda Books, Inc., 1997.

Ten colors are used to introduce readers to Mexico. Each double-page spread presents one color including the Spanish word for the color and pronunciation. Information about history, traditions, geography, food and homes.

Paulsen, Gary. *The Tortilla Factory*. Harcourt Brace, 1995.

Lyrical text and expressive paintings pay tribute to the Mexican farmers and workers who participate in a cycle of life and labor that progresses from seed planting to tortilla, and back to the farmers.

Sanchez, Isidro. *Mis Plantas el huerto*. Barron's, 1991.

Spanish only. Simple story about two children who visit their grandparent's farm and help raise vegetables to take to market.

Stevens, Jan Romero. *Carlos and the Cornfield*. Rising Moon, 1995.

In this delightful story, Carlos is told by his father that "you reap what you sow." Carlos comes to understand the rewards of hard work. Told with humor and an understanding of human nature. Excellent cornmeal pancake recipe is included!

Stevens, Jan Romero. *Carlos and the Squash Plant*. Rising Moon, 1993.

Carlos, a Mexican-American boy living in New Mexico, avoids bathing, and, as a result, a squash plant grows in his ear. A humorous family story enjoyed by young audiences.

Tenorio-Coscarelli, Jane. *The Tamale Quilt*. Quarter Inch Publishing, 1998.

This warm story interweaves the traditions of harvest and home leading to the preparation of wonderful tamales.

Vacowitz, Caryn. *Pumpkin Fiesta*. Harper Collins Publishing, 1998.

In this humorous tale, Foolish Ferdinand tries unsuccessfully to copy Old Juana's gardening techniques.

About the author

Sandra Miller has taught Early Childhood for over 13 years. She has worked for several school districts around the Denver Metro area including Jefferson County, Cherry Creek and currently teaches in Denver Public Schools. Her classrooms have included a diverse ethnic population. In addition to multiracial groups, she has taught in an integrated classroom setting including Special Needs, Colorado Preschool Project, and typical children. Experience with the Autism Team from the University of Colorado was especially interesting and helpful in her work with young children. As a member of a team, she helped develop, organize and purchase materials for the Gifted and Talented curriculum units used in the Cherry Creek Early Childhood Program. The last two years, Sandra has been involved in the writing and revising of the Professional Knowledge for Early Childhood PLACE Test.

Sandra was born in Denver and graduated from Denver Public Schools. She attended the University of Northern Colorado where she acquired her Bachelor's Degree in Elementary Education. She has continued to take courses specific to Early Childhood and Multicultural Education and routinely attends the Colorado Association for the Education of Young Children Conferences. Sandra is committed to the Public School System and the quality education of young children.